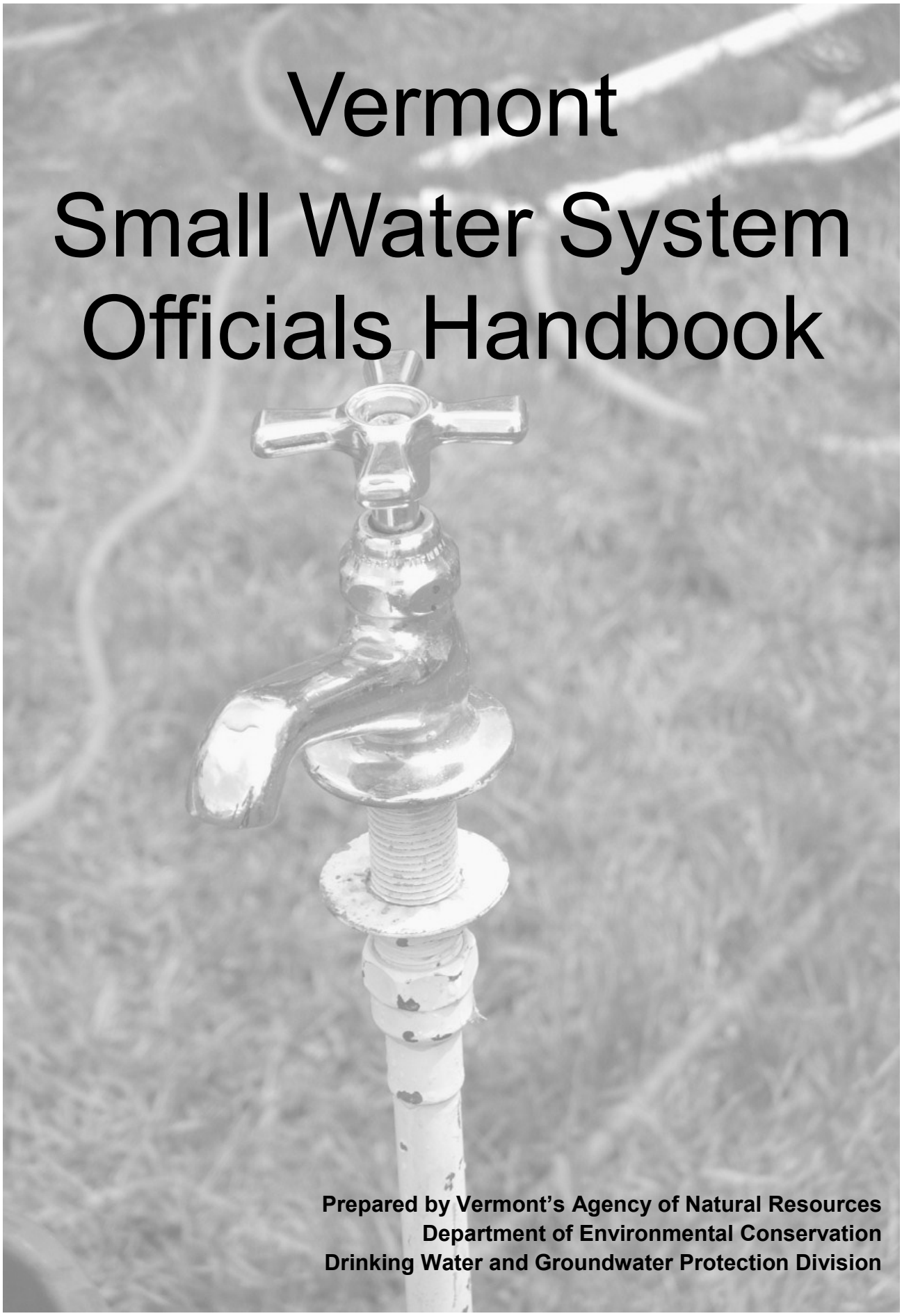
Vermont Small Water System Officials Handbook



Prepared by Vermont's Agency of Natural Resources
Department of Environmental Conservation
Drinking Water and Groundwater Protection Division

VERMONT
ENVIRONMENTAL CONSERVATION

Vermont Small Water System Officials Handbook

Prepared and Published by
Vermont Department of Environmental Conservation
Drinking Water and Groundwater Protection Division
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Cover photo credit:

Taken by Coleman Baker at the 2009 Vermont Drinking Water Week Fair. This water tap is part of Rick Kenney's 'Water Cycle'. Rick works as a water and wastewater operator for the Town of Hartford and faithfully brings the Cycle out of storage every year to entertain and educate Vermont's kids about how water moves through a public water system.

FOREWARD

There is a recently recognized need for providing information to citizens who sit on governing boards of Vermont's drinking water systems. The rules and regulations that were promulgated to implement the Safe Drinking Water Act (SDWA) Amendments of 1996 are more and more complex and require more awareness by water boards.

To ensure the SDWA requirements are met, it is our goal to train a workforce of certified operators and provide information to the governing boards. Every public drinking water system must have a certified operator. Certification is intended to provide a minimum level of competency for the protection of public health. A system of continuing education is in place so that certified operators are trained on an ongoing basis and kept abreast of current issues in the industry.

Most governing boards, however, are made up of citizen volunteers. Therefore this handbook was prepared to address several areas of unique interest to governing boards, separate from operator certification. The goal is to compile information in one place, in order to assist governing boards to fulfill their service in the public interest.

While primarily written for governing boards, much of the information contained in this handbook will be useful to all who are associated with running a public water system.

We hope that you find this useful and the information herein helps you keep your water system sustainable for future generations.

ACKNOWLEDGMENTS
The Vermont Department of Environmental Conservation - Drinking Water and Groundwater Protection Division would like to thank RCAP Solutions, Inc. for their assistance with this handbook. Thanks go also to the New Hampshire Department of Environmental Services Water Supply - Engineering Services Bureau for the groundbreaking publication, *A Manual for Owners of Small Water Systems in New Hampshire*, the first of its kind in New England, and which served as Vermont's template.

In addition, special thanks to the Kansas Rural Water Association for permission to use the information from their publication, *The Water Board Bible*.

"We'll never know the worth of water till the well goes dry"

18th Century Scottish proverb

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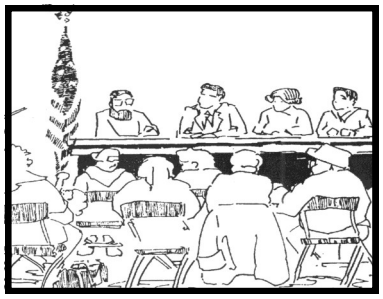


CHAPTER 1
INTRODUCTION

Public water systems play an important role in protecting public health. In the United States, we enjoy some of the best quality drinking water in the world. While drinking water that meets state and federal standards is safe to drink, threats to our drinking water are increasing. Disease outbreaks, water restrictions due to drought, increased or competing uses, security concerns, and aging infrastructure have shown that we can no longer take our drinking water for granted. Managers and operators of public water systems play key roles in protecting the public from the many risks associated with providing clean drinking water.

The purpose of this handbook is to bring together managerial and financial information relevant to the owners of public water systems. Our intent is to help you distinguish the role of a board from that of a certified operator. If you are both an operator and a board member, this information can help you see the differences in the two roles. Two key points made within this handbook are that water supply management systems which allow for *either the failure to oversee and plan for the future,* or *the micromanagement of the water system, especially by a single board member acting on his-or-her own, are sure ways to create problems.* The ideal management of a system strikes a balance between these two extremes. As in any relationship, mutual trust, fostered by good communication between the ownership (the board) and the operator, is the key to a happy and successful experience.

The Safe Drinking Water Act (SDWA)

The SDWA is the federal law that regulates the operation of a municipality, district, business or organization that serves drinking water to the public. The SDWA allows individual states to administer provisions of the Act, provided the state's regulations are at least as stringent as federal regulations. Vermont is one of 49 states that chose

to administer its own water supply program via state rules (at the minimum) in accordance with the SDWA. We do this so Vermont citizens can interact with fellow Vermonters as opposed to strangers in Boston.

In Vermont's Environmental Protection Rules, or Chapter 21, are found the Vermont Water Supply Rule (WSR). This rule refers to and adopts the authority of the Federal Safe Drinking Water Act under an agreement with the US Environmental Protection Agency (EPA), by which the State of Vermont has primary enforcement authority (primacy) of the Safe Drinking Water Act.

The purpose of the Water Supply Rule (WSR) is to protect the public health by assuring safe, affordable drinking water from **Public** and **Non-Public** water systems, and to implement and enforce the provisions of Vermont statutes and SDWA .

A very important provision of the 1996 Amendments to the SDWA was to support 'Capacity Development'. Capacity development means building the technical, managerial and financial capabilities of water systems and is a must if a system is to remain self-sustaining. It is the responsibility of management to run a successful water system. Thus, this emphasis on assistance to water system owners and operators to help them better run their system is in keeping with the notion that there is great benefit to a community if the community itself becomes capable of maintaining its own facilities. It is to this end that we too offer our assistance.

Legal and Fiduciary Responsibilities of Water Boards

In Vermont, a water board may be a prudential committee, a homeowners association board, a coop board, a municipal water commission, a water district commission, an individual owner or similar controlling entity. As a board, you are entrusted with managing the water system and have the legal power to act on behalf of and for the benefit of your customers. Your basic legal responsibilities are to:

1. Carry out your Rules and Regulations *(as laid out in your by-laws and/or water ordinances).*
2. Ensure that your system is being operated in compliance with all of the applicable federal, state and local laws and ordinances.

3. Conduct business only as a board. Individual board members can not enter into contracts, or other legal agreements unless authorized by the board to do so.
4. See that all records, minutes and notices are created, maintained and made available according to federal, state and local laws.

(Source: The Water Board Bible, p.2)

Other responsibilities that fall under the category of 'fiduciary responsibilities' include:

1. Exercising rights and powers for and on behalf of others with diligence and care.
2. Reliable cost and revenue projections that demonstrate revenue sufficiency.
3. Proof of implementation of sound fiscal management and control policies and procedures.

Fiduciary responsibilities are related to the trust that the public is placing in the water board, as their representative, to handle the affairs of the utility. Unless the board's actions are negligent, or it fails to take steps that keep the system in compliance with the WSR, the board is probably meeting the *minimum* requirements of its fiduciary role. *(Source: The Water Board Bible, p.3)*

In short, daily operations are required to be conducted by a certified operator who is trained to maintain, monitor, sample and adjust the system. Financial and managerial oversight, planning, and policy setting are traditionally better off as functions of the board. By treating the operator as an employee of the board, there is a clear chain of command and accountability. By virtue of the board taking a strong hand in setting policy and being the overseeing body, the operator will have clear guidance as to how to make decisions about day-to-day issues. It may also be helpful if the responsibilities of the board and operator are clearly detailed in writing.

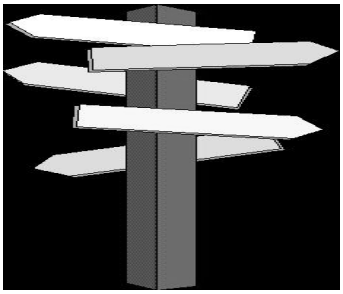
The Mission Statement

The board comes together to make decisions about the community's drinking water for a purpose: There is an interest in *providing high-quality, affordable, plentiful and dependable drinking water, which meets or exceeds state and federal standards for quality and quantity to all customers*. This is an example of a mission statement,

which simply states the organization's purpose and mission.

The governing board should take the initiative to formalize a mission statement, which can be a guidepost for future decisions. For instance, what if there is a choice between installing a new state-of-the-art SCADA (remote control) system and a project designed to improve water pressure in a part of the system where it has been inadequate. A clear mission statement can be a guide toward making the right choice by having made an earlier commitment to provide good quantity and quality water to *all* customers. Even though SCADA might be a boon to the operator and an aid to monitoring the system, if the mission has not been fulfilled by serving all customers with the same level of basic services, then the choice may become clearer.

A good mission statement will guide your work, and that of future boards, by setting policy and direction to the endeavor of running a utility.



CHAPTER 2
GOVERNMENTAL OVERSIGHT AND ASSISTANCE

A detailed description of each and every State and Federal Requirement is beyond the scope of this handbook. Its objective is to provide an overview and references which an interested person can obtain guidance on a question; this is not meant to provide legal training or advice.

Vermont Laws and Administrative Rules

The best place to really dig into the rules and laws that govern Vermont's regulators and suppliers is online at the Drinking Water and Groundwater Protection Division's Regulations Page.

If you don't have access to the Internet, or have questions pertaining to any of our rules, the DWGPD can be reached at (802) 241-3400 or toll-free in state at (800) 823-6500.

Rules

In addition to the Water Supply Rule (WSR), Vermont State Statutes also contain valuable information regarding the protection of public health and regulation of public drinking water systems.

A free copy of the WSR is available online at:
http://www.vermontdrinkingwater.org/wsrules.htm

The Vermont State Statutes are available online at:
http://www.leg.state.vt.us/statutes/statutes2.htm

Chapter 21 of the Environmental Protection Rules contains rules applicable to public water systems (*Water Supply Rule*).

Other Chapters which apply directly to water systems are:

Chapter 15 (*Well Driller Licensing Rule*)

Chapter 12 (*Groundwater Protection Rule and Strategy*).

Federal Drinking Water Regulations– 40 CFR Chapter 1, Part 141 and 142
http://www.gpoaccess.gov/cfr/index.html

Environmental Rules

The VT DEC website contains a summary of the Environmental Protection Rules including the Water Supply Rule at www.anr.state.vt.us/dec/rulessum.htm.

The Water Supply Rule is arranged into subchapters and appendices. The appendices contain more technical information, while the subchapters include important basic regulatory information. Both sections are vital to understanding the requirements of operating and managing a public water system. Below is a brief summary of the subchapters and appendices. The board should review the actual text for specific information and requirements. Your operator and engineer should be extremely familiar with these requirements, particularly if your system is upgrading components.

Subchapter 1 focuses on the authority of the State to implement the regulations relating to public water systems.

Subchapter 2 includes a long list of definitions and abbreviations. The definitions are important since they contain important legal and regulatory concepts that are used throughout the rule.

Subchapter 3 focuses on how the State administers permitting programs, including source, construction, and operating permits. These requirements are based upon Vermont Statutes.

Subchapter 4 focuses on requirements of the source and construction permit process. These permits are required for developing or redeveloping a source of drinking water or performing construction at a public water system. Permits must be obtained prior to beginning any work.

Subchapter 5 focuses on operating permit requirements and process. These permits should be closely reviewed by board members to understand the

ongoing operating requirements, any special requirements or compliance schedules that have been established for the system.

Subchapter 6 contains a wide variety of requirements to ensure that safe drinking water is delivered to customers. Many of these requirements are based upon federal regulations. Detailed requirements can be found on EPA's website, www.epa.gov/safewater. Another important component of this subchapter is the Maximum Contaminant Levels (MCLs) for chemical and microbiologic contaminants. These standards should be compared with the results from your laboratory analyses to determine if the system's water quality meets standards.

Subchapter 7 contains the facility and operation requirements including chemical treatment, operation and maintenance requirements, and inspections. The state requires and conducts routine inspections of public water systems, called sanitary surveys. Results of these surveys suggest corrective actions that are then detailed in a letter to the system. These requirements are also incorporated into operating permits and other documents.

Subchapter 8 summarizes the basic requirements to prevent cross connections between potential sources of contamination and your distribution system.

Subchapter 9 summarizes the record keeping and reporting requirements of the Water Supply Division, including Monthly Operating Reports that are prepared by the operator and signed by the Administrative Contact.

Subchapter 10 deals with the public notification requirements for a public water system. If a public notice is required, the details will be in a separate letter specific to the situation in question.

Subchapter 11 details the requirements of both imported and domestic bottled water for sale, as well as its bottling and distribution in Vermont. It also includes requirements for bulk water delivery to a public water system.

Subchapter 12 explains the responsibilities and duties of the operator, along with certification requirements.

Subchapter 13 covers the certification of laboratories that conduct drinking water analyses. A list of certified labs can be found on the Water Supply Division website.

Subchapter 15 covers the capacity requirements for public water systems.

Capacity focuses on three areas—technical, managerial, and financial. While the rule focuses on the capacity requirements for brand new systems, the Water Supply Division also has capacity requirements for existing systems.

Subchapter 16 details the requirements for a source protection plan and its related updates.

Appendix A provides further regulation and guidance in water system design, construction and protection. If the water system does not meet the regulatory requirements, the water system may be asked to upgrade as a result of a sanitary survey (system inspection).

Part 1 details the submission of plans.

Part 2 deals with general design considerations and includes specific information that both consultants and water systems should refer to in building and upgrading water systems.

Part 3 deals with the development and protection of source water.

Part 4 details the specifics of water supply treatment, including fluoridation.

Part 5 expands the treatment topic into chemical application.

Part 6 provides information on pumping facilities, including SCADA.

Part 7 includes requirements for finished water storage.

Part 8 includes the requirements for distribution systems, including hydrants, bulk water hauling stations, and isolation distances between potential sources of contamination and distribution system pipes.

Parts 9 and 10 are reserved for future use.

Part 11 focuses on non-community public water systems and non-public water system requirements. Non-community systems include non-transient non-community (NTNC) public water systems, such as schools and businesses, and transient non-community (TNC) public water systems include camps, restaurants, and motels.

Part 12 details the construction and isolation standards for wells, both public and private.

Appendix B details the Long Range Plan (LRP) requirements that are vital to developing and maintaining capacity of a public water system.

Appendix C details the frequency of monitoring for bacteria in a distribution system.

Appendix D details the required contents of an Operations and Maintenance (O&M) manual. This manual needs to be updated and resubmitted to the Water Supply Division as the system changes. Guidance for developing an O&M manual can be found at www.vermontdrinkingwater.org/wsrules.htm.

VT DEC Water Supply Division Fact Sheets

The Vermont Water Supply Division has published a number of Fact Sheets, many of which are available online. Fact Sheets provide technical information on nearly every aspect of owning and operating a drinking water system. Fact Sheet topics include:

- Capacity Development
- Drinking Water Quality
- Operator Certification
- Source Water Protection
- Water Supply Sources
- Permit Requirements

ANR GIS Internet Mapping

ANR provides interactive GIS (Geographic Information Systems) mapping tools via a web browser. Visit www.anr.state.vt.us/site/html/maps.htm to access both mapping applications described below.

ANR Well Locator This web mapping tool provides geographic information about well locations that the Water Supply Division maintains. In addition to standard map navigation tools, this application allows you to link from its location to the associated document, as well as generate reports, export search results, and print PDF maps. Agency specific features that can be located on this map include: Well Locations, Aerial Imagery, Hydrography, Wetlands. Due to the improvement of locational methods over time, older well locations may be shown several hundred feet from their actual locations. Wells pre-dating reporting requirement do not appear in this database.

ANR Environmental Interest Locator The purpose of this mapping site is to provide geographic information about environmental features and sites that the Vermont

Agency of Natural Resources manages. In addition to standard map navigation tools, this site allows you to link from a location to a document, when available, as well as generate reports, export search results, and print PDF maps. Agency specific features that can be located on this map include:

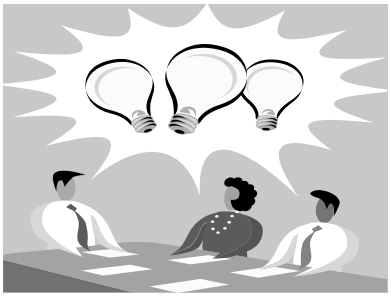
- ACT250 Permits
- Aerial Imagery
- Hazardous Waste Generators
- Hazardous Waste Sites
- Hydrography
- Stormwater Permit Sites
- Threatened and Endangered Species
- Underground Storage Tank Locations
- Water Supply Source Protection Areas
- Wetlands

Public Utilities Department

The Department of Public Service (DPS) advocates for consumers and the public interest, while making recommendations on water company petitions filed with the Public Service Board (PSB). The PSB has the formal authority to grant, deny or modify petitions of companies.

Private water companies must obtain approval from the PSB for a variety of actions including: obtaining a Certificate of Public Good to sell water to consumers; changing rates charged for water; changing rules or regulations in the company's tariff; borrowing money; and, selling assets or stock. Municipal and non-profit cooperatives or associations that sell water only to their members are not subject to PSB jurisdiction. The DPS provides guidance to companies in the process of filing a petition with the PSB. There are 31 small private water companies ranging in size from one to 650 connections. Information on the DPS and PSB can be found at the following websites:

Department of Public Service- http://publicservice.vermont.gov
Public Service Board- www.state.vt.us/psb



CHAPTER 3
MEETINGS

Regular meetings of a governing board are necessary to ensure that problems are addressed in a timely manner and that communications between the board and the operator are maintained.

Holding regular meetings and keeping communication open with the operator (who may have several systems under his care) are essential. The character of the meeting is a good indication of how effective the board is.

Preparation

A written agenda should be distributed to board members several days in advance of the regular meeting. Having an agenda allows board members the opportunity to come to the meeting prepared, and is vital to ensuring the effectiveness of the board.

Input from the public about such matters as water quality, water pressure, taste, color and odor, as well as any problems that might be due to treatment processes, should be available in writing to board members for their attention.

To assure that the system is in compliance, the operator must communicate with the board regularly. The operator should be prepared to give the board a written report of any preventative maintenance performed, test results, customer complaints, and the system's performance. Any unusual occurrences, such as a power spike, a drift in power usage, or a repair, should be reported and critiqued. This information is useful to the board for one of its prime duties: planning for future needs.

Notification

Notification of meetings is required for all publicly owned water systems. Privately owned systems should check with the by-laws of the organization to determine if

meetings have to be notified, and how. Even if notification is not required, the board should let customers know about meetings and include an agenda.

The time and place of all regular meetings shall be clearly designated by statute, charter, regulation, ordinance, by-laws, resolution or other determining authority of the public body and shall be available to any person upon request.

The time, place and purpose of a special meeting shall be publicly announced at least 24 hours before the meeting. Municipal public bodies shall post notices of special meetings in or near the municipal clerk's office and in at least two other public places in the municipality, at least 24 hours before the meeting. In addition, notice shall be given, either orally or in writing, to each member of the board at least 24 hours before the meeting, except when a member may waive notice of a special meeting.

Emergency meetings may be held without public announcement, without posting of notices and without 24-hour notice to board members, provided some public notice thereof is given as soon as possible before any such meeting. Emergency meetings should be held only when necessary to respond to an unforeseen occurrence or condition requiring immediate attention by the board. Appendix E contains the full text of Statute Title 1, Chapter 5, Section 312, which describes the notification process.

Open Meeting Law

Vermont's Open Meeting Law is described in Title 1: General Provisions, Chapter 5: Common Law; General Rights, Section(s) 312-314. All meetings of a public body are declared to be open to the public at all times, except as provided in section 313 of this title. No resolution, rule, regulation, appointment, or formal action shall be considered binding except as taken or made at such open meeting, except as provided under section 313(a)(2) of this title. A meeting may be conducted by audio conference or other electronic means, as long as the provisions of this subchapter are met. The board shall record by audio tape, all hearings held to provide a forum for public comment on a proposed rule, pursuant to section 840 of Title 3. The public shall have access to copies of such tapes as described in section 316 of this title.

Minutes shall be taken of all meetings of public bodies. The minutes shall cover all topics and motions that arise at the meeting and give a true indication of the business of the meeting. Minutes shall include at least the following minimal information:

- All members of the board present;
- All other active participants in the meeting;
- All motions, proposals and resolutions made, offered and considered, and what disposition is made of same; and,
- The results of any votes, with a record of the individual vote of each member if a roll call is taken.

Executive Session

No public body described in section 312 of this title may hold an executive session from which the public is excluded, except by the affirmative vote of two-thirds of its members present. A motion to go into executive session shall indicate the nature of the business of the executive session and no other matter may be considered in the executive session. Such vote shall be taken in the course of an open meeting and the result of the vote recorded in the minutes. No formal or binding action shall be taken in executive session except actions relating to the securing of real estate options under subdivision (2) of this subsection. Minutes of an executive session need not be taken, but if they are, shall not be made public subject to subsection 312(b) of this title.

During the Meeting

Without participation by members of the board, the board as a whole will not be able to make sound decisions. Committee members should be ready to participate in meetings, keeping the following ground rules in mind:

DO

- read agendas;
- participate in discussions;
- help with time management;
- stay focused;
- take by-laws seriously;
- vote thoughtfully;
- keep board business confidential;
- review draft of minutes.

DON'T

- come unprepared;
- arrive late and/or leave early;
- distract others;
- ignore by-laws;
- put down other board members or staff;
- gossip about board business.

(Source: The Water Board Bible, p.21)

Participation

Signs that all is not well in the participation area include:

- Sporadic attendance at meetings. *Solution– adopt a bylaw saying that more than three unexcused absences in a year constitute resignation.*
- Being unprepared. *Solution- board members inform the offender that he/she is a burden on the system, and is wasting time at meetings.*
- Put-downs, wisecracks, distractions. *Solution– Committee chair stops this behavior as it happens, and re-focuses attention to the agenda.*
- Dominating personality. *Solution– Chair thanks the dominator for his/her opinion, then solicits other input. Later, alone, the Chair alerts the person that every member's opinion is valued, and that the committee can be more effective when all can be heard.*
- Unethical behavior. *Solution– Address this as soon as a hint appears. Annually, review the by-laws concerning conflicts of interest. Encourage abstaining from votes where there is a potential conflict of interest.*
- Conflict (results from disagreements). *Solution – Disagree diplomatically ("I hear and respect your opinion." "I don't agree, but value your opinion.") Reach or create a compromise; seek more information; ask additional questions; communicate and seek a win-win solution.*

(Source: The Water Board Bible, p.22)

It's not easy to bring bothersome behavior to someone's attention, especially if a bond has developed by virtue of being on the water board together. However, the board is only as good as its members. The job of the board is to see that the mission statement is carried out. To do this all participants must pull together.

Follow-up

Minutes are essential because they are the official record of decisions that the board has made. After meetings, board members should review the minutes and keep the business of the board strictly related to what was discussed at the meeting, without side comments or gossip.

Confidentiality is difficult because it requires self-discipline. The line between natural pride in the workings of the system, talking about plans and achievements, and giving up information that should not be discussed, is easily crossed during normal conversation. Breaking confidentiality is often viewed as a break in trust. Since trust is basic to building a team, it follows that breaking confidentiality quickly can lead to the break up of the team.

CHAPTER 4
OPERATIONS

The board guides and sets the direction for the utility, while the operator conducts the day-to-day operations of the utility. The health and safety of the public, as well as the operator's license are at risk if the utility is not in compliance with the Safe Drinking Water Act.

The Water Operator

The operator is responsible for the proper operation of the water system. He or she has been trained and licensed to understand all aspects of operation and maintenance of treatment, storage, source and distribution systems.

The board relies on operators to run the system properly and to keep the board informed of issues present *and* projected. The board should seek the operator's advice regarding user rate adjustments and contribution to capital improvement funds in order to maintain system financial capacity.

The operator is the board's greatest asset, as the operator is key to a safe, adequate supply of drinking water. He or she keeps the equipment functional and current, and maintains proper water chemistry to assure compliance and quality with state regulations. The operator may also be the principal contact with the consumers and the State. Boards should also consider securing an additional operator for emergency purposes, for example if the primary operator get sick, is on vacation or is otherwise unavailable.

Hiring an Operator

Before advertising for an operator, a detailed job description needs to be produced. Included in this description are the responsibilities and expectations of the position, the work schedule, and any physical requirements.

An accurate job description should include the following:

- job requirements;
- minimum qualifications;
- work schedule;
- responsibilities; and,
- the size of the system.

Compensation

To attract good employees, compensation must be adequate. Experience shows that a well paid, competent employee is more affordable than a poorly paid incompetent employee, as fines, asset losses, and loss of consumer confidence may more than offset the difference. Compensation may come in pay, but may also include training and advancement opportunities.

Expectations

The board should expect regular reports from the operator on the condition of the system. He or she should keep the board informed of equipment replacement needs, system expansion, and/or facility upgrade needs. The board should expect copies of monthly water quality reports and lab results. The board should be immediately informed of regulatory violations or emergency situations with the system. The sample operator job description, included as Appendix C, is a guide to the day-to-day duties of an operator. The water system operator shall communicate any regulatory non-compliance issues to the owner or manager of the water system, and may designate other person(s) to perform any duties specified above, provided that the responsibility for execution of these duties remains with the primary operator.

Regular meetings with the operator to discuss new regulations, compliance monitoring results, status of the system, and issues with the public and water system will inform the board and provide a basis for future decisions and actions.

Personnel Policies

The board should have an established Personnel Policy and Procedures Manual. This manual should be revisited annually and amended to reflect labor law changes and

Town or District changes. The manual should contain the following, as a minimum:

- Listing of employee benefits such as vacations, sick leave, leave of absence, jury duty, and related benefits;
- Policy and procedure regarding work hours, time accounting, attendance monitoring, overtime, holidays, safety and health, etc.;
- Employment practices of the organization such as equal employment opportunities, outside hiring, termination procedures, retirement, benefit programs, absenteeism and tardiness controls, employee complaints, and problems and appeals procedures;
- Policies and procedures for professional development, training, and continuing education; and,
- Policies and procedures governing disciplinary actions.

Supervising

An individual member of the board does not have the power to direct the operator. A majority vote is required to institute a directive. The operator is answerable to the board as a whole. If the utility has multiple employees, then the board should set the chain of command so that the supervisor or manager is answerable to the board. The remaining employees fall under the supervision of that supervisor or manager.

Evaluating

The employee (operator) should be evaluated within six months of employment. This evaluation gives the board an opportunity to explain performance issues and areas that may need improvement, as well as those areas where the board is satisfied.

A six month evaluation also gives the employee a chance to improve performance before the annual review. The performance evaluation should be an open discussion between the operator and board. The employee should be allowed to give his/her perspective and to lay out a plan to improve performance, if needed.

Appendix D includes two options for employee evaluations. Employees should receive a written evaluation annually that contains an assessment of the previous year's performance, conduct, and recommended developmental or corrective actions for the following year. At this time, the employee should receive a recommendation as to the

annual adjustment in pay.

The evaluation should be reviewed with the employee, and he/she should be given an opportunity to provide a written comment on the evaluation. Both the evaluator and the employee should sign the review upon completion. Annual evaluations should be maintained in the employee's permanent file.

Conflict Resolution

Employee disciplinary policies and procedures should be part of the Personnel Policy and Procedures Manual, and should include escalating disciplinary steps. The board should train all employees in disciplinary procedures, and make sure that he/she understands personnel performance expectations and disciplinary procedures. Discipline should be administered evenly and respectfully. All investigations, notices and hearings must occur in a timely fashion. All personnel evaluations and disciplinary measures must be documented.

Typical disciplinary actions, listed in progression, are:

- Oral Warning
- Written Warning
- Suspension
- Discharge

Water Quality Testing

Public Water Systems conduct water quality monitoring under the Safe Drinking Water Act and State of Vermont Water Supply Rule, Chapter 21, and are required to have all samples analyzed by a laboratory certified for drinking water analyses by the Vermont Department of Health. A list of Laboratories Certified for Drinking Water analyses may be found at the Vermont Department of Health website: http://healthvermont.gov/enviro/ph_lab/lab.aspxl

Certified Laboratories offer testing for:

- Microbiology;
- Organic chemistry;
- Inorganic chemistry; and

- Radiochemistry

Microbiological tests are for bacterial organisms that can be found primarily in water. Total Coliform and *E. Coli* are the primary bacterial indicators.
Organic chemical analyses are for the element carbon. Common tests are for Volatile Organic Compounds (VOCs), include petroleum products such as the gasoline constituent methyl-tertiary-butyl-ether (MtBE), as well as industrial solvents, and Synthetic Organic Compounds (SOCs), including pesticides and herbicides.

Inorganic Compound (IOC) analyses are for the non-carbon elements and associated compounds found in our environment. These tests include metals such as Arsenic and Lead, nutrient compounds containing Nitrogen and Phosphorus, and physical measurements such as pH and specific conductance.

Radiochemical analyses are for those inorganic elements, primarily Uranium and Radon, that are radioactive.

The Physical Plant

The Board's Role

Board members are responsible for ensuring compliance with federal and state laws governing safety, drinking water quality, waste streams, roads and highways, wetlands and labor. The Vermont Water Supply Division is a good resource for understanding some of the required regulations that must be met.

It is the board's responsibility to hire and retain a certified operator who properly maintains and operates the water system, and to provide him/her the tools to do the job. These tools include capital reserves, personnel policies, an adequate budget, and the support of the board members.

Approval of an annual budget is the board's responsibility; spending within the approved budget is the operator's responsibility. Budgets should be based on meeting the needs of the water system (both long- and short-term), not on keeping water rates low. Once the budget has been set, the rate structure should be reviewed annually

and adjusted to meet the budget.

Supporting the operator may be one of the most important roles of the board, and is the major link between board and system compliance. If an operator is discouraged from bringing "bad news" to the board, it may lead to a cover-up of non-compliance and customer complaints. This can lead to loss of consumer confidence, and regulatory action that can be more costly than if the issue was corrected earlier.

Contract Operators and their Role

Owners of small water systems might consider the benefits and simplicity of hiring a firm that offers the part-time services of a professional certified operator on a contractual basis. As part of this consideration, it is suggested that a few of these firms be contacted to discuss different levels of service and cost.

A listing of contract operators can be found with the Vermont Rural Water Association. You can obtain a copy by contacting them at 800-556-3792. The WSD has a guidance document on how to hire an operator and develop a contract, located at the website - www.vermontdrinkingwater.org/forms/HiringAnOperator.pdf

CHAPTER 5
SETTING BUDGETS AND USER RATES

The *budget is a major tool for tracking all necessary and authorized expenditures to ensure that the water system is operated and maintained in accordance with the Water Supply Rule and the system's Mission Statement.*

Purpose

A budget will help determine the true cost of water so that billing will be fair and irrefutable. A budget can help:

- Reduce unnecessary costs;
- Determine if actual costs are being incurred as projected; and,
- Improve ability to anticipate costs.

Budgeting is a process that assists board members in anticipating impacts to revenue, long-term debt, and/or projected capital repairs and improvements. A projected budget establishes and defends the proper amounts available for emergencies, debt repayment, and future repairs and improvements. It is a tool to ensure that the system can live within its means while sustaining water quantity and quality. It will also alert board members to an imbalance of expenses to revenue.

Elements of a budget

Many budgets include:

1. Revenue
2. Operating Expenses
3. Debt Service Payments
4. Reserves
    - *A. Emergency Operating Expenses*
    - *B. Debt Service Reserves*
    - *C. Reserves for Asset Replacement*
    - *D. Capital Improvement Fund*

Continued on page 30

Table 1
Major Parts of a Water Utility Budget

Revenues
- Residential
- Commercial
- Agricultural
- Industrial
- Wholesale
- Public Authorities
- Charities
- Fire Protection
  - *Hydrant maintenance*
  - *Refill Fire Truck Pumper*
- Connections and other fees

Reserves
- Deprecation
- Interest Income
- Capital Improvement
- Contingency

Debt Service Payments
- Long Term Debt Escrow

Taxes
- Payroll Tax
- State Tax
- Sales Tax

Expenses
- **Payroll**
  - Operator *(Primary)*
  - Operator *(Backup)*
  - Administration
  - Trustee Fees
  - Outside Contractors
- **General Expenses**
  - Legal
  - Accounting *(Audit Fees)*
  - Office Lease/Rent

- Newspaper Notices
- Postage *(PO Box & Stamps)*
- Memberships
- Training
- Transportation
- Licenses
- Operating Permits

Regulatory Assessment

Compliance Testing / Lab Fees

Utilities

- Electrical
- Heating
- Phone
- Cell
- Pager

Insurance

- Workman's Comp
- Liability
- Director/Officer Policy
- Bond
- Property

Operation and Maintenance

- Water Treatment Chemicals
- Hardware
- Repair Parts
- Material Supplies charts/pens
- Plowing & Grading
- Equipment Rental
- Repair Work
- Instrument Calibration
- Special Services
- Leak Detection
- Well Screen Cleaning
- Engineering Services

E. Sinking Fund

Example

Table 1 illustrates examples of these, and further gives a representative list of items that might be included.

Table 2 is an example utility budget and demonstrates how parts of an expense budget are compiled. This represents the minimum amount of revenue that must be recovered to keep the system solvent. Note that Capital Improvement is included here as an expense. This is in recognition that components are in the process of wearing down during any given year thereby incurring an expense. In this example, debt service is distributed evenly among all the users. This is considered "fixed" because it is due annually, regardless of the amount of water produced.

The table also shows one way to calculate an annual flow charge, based on the number of gallons pumped (metered) and the amount of expense that must be recovered. The flow charge is considered variable because it varies from year-to-year based on the amount of water consumed by metered customers.

In an un-metered system, the flow charge could be distributed according to some other criteria, such as fixtures, or anticipated design flow. However, many smaller systems choose to charge a flat rate for each connection regardless of the amount of water consumed.

SETTING WATER RATES

Water bills are usually made up of two equally important parts, and reflect two entirely separate parts of budgeted expenses of the system.

Fixed Costs and Base Rate

Fixed costs are based on expenses incurred by the system regardless of the amount of water produced. They typically include debt service, insurance, taxes, salaries, training, administrative costs, capital improvement and/or sinking fund, and system maintenance.

Normally, fixed costs make up the base rate. Most small drinking water systems choose to treat every connection equally, resulting in a single flat rate for each connection. Flat rates take the entire water system budget and divide it equally between all users. Systems choosing to use a base/flow rate system must have a way to track usage, typically through individual water meters on every connection.

One approach to developing customer *base rates* is to determine usage for each connection. A per-connection calculation may be based on numbers and types of fixtures in a facility. For example, the number of washing machines in a laundromat may indicate how much water is likely to be used. Customer's fixed base rates are directly proportional to water system demand, assuring that heavy water users pay their fair share of the fixed expenses needed to supply the water. This would result in a variety of base rates for the system.

Another type of rate often used by small communities is charging based on category type. For example, a single-family home could be a standard category, but there could be any number of categories for customers including commercial, multi-family, industrial and wholesale. Often within this rate structure, a district allows a reduced residential rate category for retired single persons or couples on a fixed income. Each category has an associated base rate to correspond with its projected use.

Clearly, it is important to have water rates that are fair and equitable. The percentage-of-use calculation, although most accurate, is complicated and difficult for the average user to understand. Usually small rural systems with mostly residential users prefer the flat rate for all costs, because it's easier to understand and relatively fair.

Variable Costs and Flow Rate

Variable costs are the actual expenses incurred by providing water to customers; including electricity, chemicals and water testing. This charge is optimally a function of a meter reading, and usually associated with a rate structure that uses a base and flow rate to determine water bills.

The most popular variable cost rate is shown in the sample revenue structure in Table

Table 2
Example Small Water System Annual Budget

Expense Items	
Administration (F)	$1700
(salaries/stipends; auditor fee)	
Postage (F)	$400
(billing; CCR; public notices)	
Insurance (F)	$500
(structure/equipment; workers compensation)	
Permit to Operate (F)	$200
Licenses (F)	$100
Memberships (F)	$100
Operator Certification Training (F)	$800
Source Operation (V)	$3600
(electricity; fuel for generator)	
Compliance Testing (V)	$900
(bacteria; lead/copper; nitrate/nitrite; VOC; SOC; IOC)	
Water Treatment (V)	$2000
(Chlorine; miscellaneous supplies; maintenance)	
Distribution System (F)	$1000
(curb stop/valve exercising; hydrant flushing; tank cleaning)	
Meter Reading (F)	$1500
Services (F)	$1248
(leak detection; snow plowing; lawn cutting)	
Supplies (V)	$300
(cleaning supplies; paint; fuel for vehicles)	
Subtotal Operating Expenses	**$14348**
Debt Repayment (F)	**$44000**
Capital Improvement Fund (F)	**$8500**
Grand Total Expenses	**$66848**

F=fixed cost; V=variable coast

3 at the end of this chapter. In this example, the flow rate is based on the amount of water produced divided by the cost to produce that amount of water. The system may decide on a flat rate for each unit of water consumed. Another choice might be an increasing block rate. Increasing block rate charges a higher price for increasing amounts of water and is designed to discourage excess consumption or encourage conservation/efficiency. It is often used in communities where there is a limited amount of water at the source or there is a large number of high water users.

Some systems have other rate adjustments that adapt to individual needs. For example, a seasonal community might wish to adopt a different set of rates for winter and summer. Systems may sell water to other systems, towns, or customers, often called a consecutive system. Under these circumstances, an inter-municipal agreement may be a desirable legal solution to communities with regional issues. This sort of document, usually drawn up by an attorney, makes it possible for each system's powers and rights to be protected, giving them a tool to design a legal management plan for their system.

SIMPLE RATIOS TO ASSESS FINANCIAL HEALTH

Operating Ratio-

Revenue / Expenses=
= $70,060/$66,848
= 1.04 (>1 = good financial health)
(if <1 system needs more revenue)

Debt Service Coverage-

(Annual Gross Revenue— O&M expenses)/ Annual Principal and Interest Charges=
= ($70,060-$14,348)/$44,000
= 1.26

NOTE:

1.5 or greater is very good

1.0 to 1.5 is acceptable

<1.0 means inadequate revenue to cover debt service

Table 3
Example of Base and Flow Rate Revenue Structure

A. Base Rate

Divide fixed expenses by number of connections
200 connections/$60,048
= $300.24 per year/per connection

B. Flow Rate (based upon use; system produces 45,000 gallons per day)

Multiply the number of gallons used per day by the number of days water is used throughout the year.
45,000 gallons of water produced per day x 365 days =
16,425,000 gallons per year - 2,400,000 gallons (water allocated for hydrant flushing, etc)

= 14,025,000 gallons produced per year

Then divide variable operating expenses by gallons produced.
$6800/14,025,000 *(gallons produced per year)*

= $0.00050 dollars per gallon or $0.50 per thousand gallons

Revenue from water production
Multiply 14,025,000 *(the gallons produced per year)* by $0.50 per thousand gallons.

= $7012.50

C. Other Revenue

Interest on Deposits	$700.00
Hook-up Fees	$2,500.00

D. Grand Total Revenue

Fixed Charge	$60,048.00
Variable Charge	$7012.50
Other Revenue	$ 3,200.00

Grand Total Water Revenue	**$70,060.00**
Grand Total Expenses	**$66,848.00**
Difference (to put in sinking fund, etc.)	**$3,212.00**

Total Cost per connection
$300.24 per year
plus $0.50 per 1000 gallons consumed

CHAPTER 6
COMMUNICATION

Communication is necessary for the public to understand that their funds are being used properly with regard to operation of the public water system. Communication also helps the board understand the public's concerns and perspective. A utility's good image can be communicated through public meetings, public announcements, tours, open houses, word of mouth, bill stuffers, customer surveys, and newsletters. The Consumer Confidence Report, required yearly, is also an excellent time to inform the public (see below).

Image

Good management is a sign of a quality organization. The public may quickly realize there is a lack of good service, and will correctly equate this to poor management. It is critically important that all aspects of water utility service, including management, provide the highest quality service to the public. Utility management begins with reliable service.

Bill stuffers and public meetings relay the status and condition of the system. Do not make the mistake of assuring the public that all is well for years, and then present a significant bond article for financing a major project.

Be attentive to consumer complaints as they may indicate an underlying problem with the system. Communicating with customers and investigating complaints will improve the water utility's image and credibility.

Another way to promote the system is to use the media. Educate the local media about the system by submitting public information articles for publication on issues such as proper household waste disposal and water conservation, as well as problems with the

system. Openness is essential.

Consumer Confidence Reports

The SDWA requires public community water systems to annually report on water quality in a Consumer Confidence Report (CCR). These reports must present information on source water, levels of any detected contaminants, health effects of any contaminants found in excess of the standard, and any unregulated contaminants. The reports must include definitions of "maximum contaminant levels (MCLs)" and "maximum contaminant level goals (MCLGs)", as well as explanations of health concerns associated with contaminants. All definitions and explanations must be in plain, easy to understand language. Templates for these reports can be found on the Water Supply Division's website at http://www.vermontdrinkingwater.org/permits.htm. Technical assistance is available from RCAP Solutions, the Vermont Rural Water Association or the Water Supply Division. The CCR is also an excellent opportunity for the system to educate users about what is being done to correct any deficiencies.

Preparing your Drinking Water Consumer Confidence Report can be downloaded from the EPA website, www.epa.gov/safewater/ccr/pdfs/guide_ccr_forwatersuppliers.pdf.

Public Notification

Public notification helps to ensure that consumers will always know if there is a problem with the drinking water. The SDWA requires water systems to notify consumers for the following violations:

- Failure to comply with an applicable maximum contaminant level;
- Failure to comply with a prescribed treatment technique;
- Failure to perform required water quality monitoring;
- Failure to comply with prescribed testing protocols;
- Issuance to the utility of a variance or exemption; and,
- Failure to comply with an upgrade or process improvement schedule required by a variance or exemption.

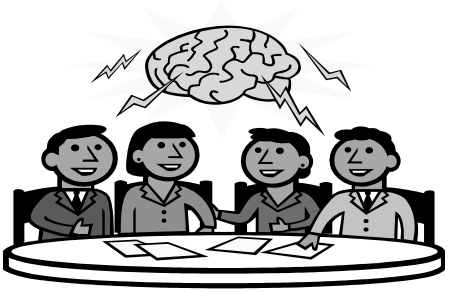
Sample notice templates for several situations and public notice certification forms can be found at: http://www.vermontdrinkingwater.org/permits.htm.

Significant violations are the most critical, as they have the potential for immediate negative impacts on human health. Public notification of these violations must be made immediately, and may include radio and television announcements. Mandatory negative health effects language to be included in public notifications is provided in federal regulation (see CFR Part 141).

The Public Notification Rule: A Quick Reference Guide can be downloaded from the EPA website, http://www.epa.gov/safewater/publicnotification/pdfs/guide_publicnotification_pnhandbook.pdf

Crisis Communication

Consumers often fear the worst during a crisis. Public officials should remain calm and accurately relay the facts of the situation, whether it is interrupted supply or public notification of a WSR violation. Avoid rumors or speculation and try to convey that public safety is of utmost importance to the utility. Emergency communication policies and procedures should be stated in an Emergency Response Plan (ERP). These policies and procedures should state (and show using an organizational chart) that there is a single person designated to release information to the public, to avoid conflicting information and confusion. The best rule of thumb is to be quick and honest. Advise users of the problem, what is being done to address it and what precautions to take.



CHAPTER 7
PLANNING

One of the most important duties of a board is planning for the future. If the board is not looking toward the future, who is?

Asset Management and Long Range Planning

Asset Management and Long Range Planning are the backbone of Vermont's Capacity Development Program. The two topics are closely linked, but can function independently of each other. Both processes are designed to help a water system be more proactive in its infrastructure management and budgeting while maintaining a high degree of system reliability.

Asset Management is a life cycle approach to managing a system's infrastructure. Asset management requires cooperative efforts between operators and water boards. An asset management plan can be developed by asking the following five questions:

1. What is the current state of my system's assets?

The first step in managing assets is knowing their current state. Because some of this information may be difficult to find, you should use estimates when necessary. Over time, as assets are rehabilitated, repaired or replaced, the inventory will become more accurate.

You should ask:

- What do I own;
- Where is it;
- What is its condition;
- What is its useful life; and,
- What is its value.

2. What is my required 'sustainable' level of service (LOS)?

Knowing your required 'sustainable' level of service will help you implement an asset

management program and communicate to stakeholders what you are doing. Quality, quantity, reliability, and environmental standards are elements that can define level of service and associated system performance goals, both short- and long-term. You can use information about customer demand, data from utility commissions or boards, and information from other stakeholders to develop your level of service requirements. Your requirements can be updated to account for changes due to growth, regulatory requirements or technology improvements.

You should ask:

- What level of service do my stakeholders and customers demand;
- What do the regulators require;
- What is my actual performance; and,
- What are the physical capabilities of my assets.

3. Which assets are critical to sustained performance?

Because assets fail, how you manage the consequences of failure is vital. Not every asset presents the same failure risk, or is equally critical to your water system's operations. Therefore, it is important to know which assets are required to sustain the water system's performance. Critical assets are those you decide have a high risk of failing (old, poor condition, etc.) and major consequences if they do fail (major expense, system failure, safety concerns, etc.). You can decide how critical each asset is and rank them accordingly. Many water systems may have already accomplished this type of analysis in vulnerability assessments.

You should ask:

- How can assets fail;
- How do assets fail;
- What is the likelihood (probability) and consequence of asset failure;
- What does it cost to repair the asset; and,
- What are the other costs (social, environmental, etc.) that are associated with asset failure.

4. What are my minimum life cycle costs?

Operations and maintenance (O&M), personnel, and the capital budget account for an estimated 85% of a typical water system's expenses. Asset management enables a system to determine the lowest cost options for providing the highest level of service

over time. You want to optimize the work your operator is doing, where he is doing it, and why. An asset management program helps make risk-based decisions by choosing the right project, at the right time, for the right reason.

You should ask:

- What alternative strategies exist for managing O&M, personnel, and capital budget accounts;
- What strategies are the most feasible for my organization; and,
- What are the costs of rehabilitation, repair, and replacement for critical assets.

5. What is my best long-term funding strategy?

Sound financial decisions and developing an effective long-term funding strategy are critical to the implementation of an asset management program. Knowing the full economic costs and revenues generated by your water system will enable you to determine your system's financial forecast. Your financial forecast can then help determine what changes need to be made to your system's long-term funding strategy.

You should ask:

- Do we have enough funding to maintain our assets for our required level of service; and,
- Is our rate structure sustainable for our system's long-term needs.

(source: EPA Publication *Asset Management: A Best Practices Guide*)

Check-up Program for Small Systems (CUPSS)

The goal of CUPSS is to help water systems better communicate between staff and decision makers by creating concise and easy-to-use reports on the system's status and to create a central location for all water system asset information to be stored. CUPSS can also improve financial management, making the best use of limited resources by highlighting when to stop repairing and start replacing. The tool is specifically designed for systems serving less than 10,000, the majority of Vermont's drinking water systems.

The CUPSS tool has unique features making it very easy to use and navigate.

- Asset development from well to tap;
- Visual graphs of asset priorities;
- Multiple utility management (water and wastewater); and,

- Works off of your own computer.

The program is available to download at http://www.epa.gov/cupss/. Hard copies are also available through the Water Supply Division. The WSD is can also help with initial set-up, training and trouble shooting.

Long Range Planning is a more comprehensive look at the future sustainability of a water system. The Long Range Plan (LRP) includes an inventory of the system's assets and is an integral part of evaluating the system's future needs. It is also a useful way to determine if a system is able to financially meet the projected needs. Additionally, it is a good way to establish managerial capacity in that a LRP will require the organized management structure to develop a comprehensive, useful document. Below is a list of what should be included in a long range plan:

- **Description of existing system conditions**: Is the system a Fire District, Homeowners Association, school, etc.; how many connections are there; is the source groundwater or surface water; what kind of treatment is required; how long has the system been around?
- **Describe final ownership structure, include by-laws, polices, etc.**: Will the system become a Homeowner Association when 70% of the lots are sold, or will it remain in private control? A customer complaint policy should also be included.
- **Cost of Operation and Maintenance of System**: Project a 5-year budget and justify the expenditures. Show a capital fund reserve. Discuss adjustment of user rates here.
- **Operation and Maintenance Revenues**: Where does the money come from and how much is coming in.
- **Growth and Modernization Plan**: Discuss consolidation possibilities here (remember consolidation doesn't necessarily mean physical consolidation- your system could decide to hire a contract operator or, in a school district, have one operator for the entire district). You should also consider if the area your system is in is growing. Is the growth mainly residential or are there industrial and commercial pressures, as well. Also will there be future plant upgrades needed to meet regulations.
- **Water Conservation Plan**: Discuss your system's efficiency. Do you have a plan for conservation, and not just if there is a water shortage? What are your education and outreach efforts?

CUPSS is a wonderful tool to accomplish both asset management and long range planning. Assistance in developing an Asset Management Plan or Long Range Plan is available through the Water Supply Division or Vermont Rural Water Association.

Emergency Response and Vulnerability Assessment

Proper emergency response is essential for a safe and secure water system, in addition to ensuring it be a well coordinated and planned process. An emergency response plan (ERP) outlines the actions that a water system should take in response to a major event, such as a natural disaster or man-made emergency.

Before an ERP is developed, it is crucial to do a Vulnerability Assessment (VA). A VA is an evaluation of a water system's susceptibility to an adverse event (intentional or unintentional). In other words, it is the identification of weaknesses in water system security, focusing on the defined threats that could compromise its ability to provide adequate potable water, and/or water for firefighting. An adverse event might include a terrorist attack, natural disaster, or any emergency caused by reasons beyond the control of the water system. Any of these might substantially disrupt the ability of the system to provide a safe and reliable supply of drinking water.

The VA requires community officials and employees to envision the effects of a long-term power outage, loss of source water, damage to a distribution main, or any possible emergency situation that may significantly degrade the water system's performance. Once possible needs are identified through this process, a list of alternatives, emergency actions and necessary equipment should be produced. A system can then generate an ERP for these scenarios.

Once an ERP is prepared, staff and officials should practice scenarios presented in this plan, which may be done through tabletop exercises, so they are ready in the event of an actual emergency.

At a minimum, the ERP should include:

- System identification
- Chain-of-Command

- Notification List
- System Components
- Potential Emergency Scenarios
- Alternate Water Source(s)
- Boil Water
- Water Conservation
- Return to Normal Operation
- Plan Readiness
- Signatures

As of 2004, both VAs and ERPs were required for every water system serving a population greater than 3,300 persons. However, all water systems can benefit from performing such an assessment.

Source Water Protection

Implementing source water protection measures in order to maintain the quality of source water is less costly than treating for contamination that may be preventable. For the vast majority of systems, source protection measures can be implemented with a modest investment of staff time, and little to no additional expenses.

A good starting point for source water protection for community and non-transient, non-community water systems is the Source Protection Plan (SPP), prepared by each water system and updated every three years. In addition to the information contained within the Source Water Assessment Plan (SWAP, described below), the SPP also contains an action plan the water system will implement to reduce the risks of contamination within the water source's source protection areas.

The SPP for transient, non-community water systems is the SWAP, and is prepared by the WSD.

A SWAP Report includes:

1. a map of the source investigation area.
2. an inventory of potential sources of contamination (PSOCs) within that area.
3. a high, medium, or low rating for each of PSOCs; and a description of possible protection measures.

Water boards should use the SPP as a starting point in determining which source water protection measures are appropriate. It is also advisable to inventory, on a periodic basis, properties within the source protection area for new PSOCs.

One of the first steps in developing and updating your SPP is to identify the PSOCs within the Source Protection Area (SPA). PSOCs may include:

- septic systems;
- underground fuel tanks;
- industries, animal wastes *(both wild and domestic)*; and,
- potentials for spills of fuels or toxic wastes.

You may want to visit each PSOC so you can inform the property owner that they are located with the SPA for the water system and to share suggestions for diminishing the risk.

The WSD has a variety of guidance materials, public education pamphlets and training opportunities to help water suppliers plan and implement source water protection programs.

Also available from the WSD is *An Ounce of Prevention,* a public education handbook that can be useful in developing your source water protection program. Simple behavioral changes or proper maintenance of on-site septic systems, proper application of fertilizers or taking waste oil to a recycling center, is all that is needed to mitigate some threats. *An Ounce of Prevention* can be downloaded at www.vermontdrinkingwater.org/SWAPP.htm.

CHAPTER 8
DRINKING WATER STATE REVOLVING FUND LOAN PROGRAM

The Drinking Water State Revolving Fund (DWSRF) loan program provides low cost financing to municipalities, which includes Fire Districts and Water Districts, and some privately owned public water systems. The infrastructure projects funded by the DWSRF help water systems come into or maintain compliance with the WSR, to protect public health, and ensure a safe supply of drinking water. Financial assistance is provided through three different types of loans.

Construction Loans

Eligible Organizations:

- Publicly owned community water systems
- Privately owned community water systems
- Non-profit, non-community water systems

Nearly all water system improvement projects are eligible (new construction, renovation or replacement, or consolidation of systems) that will facilitate compliance with federal primary drinking water regulations or otherwise significantly further health protection objectives of the Safe Drinking Water Act (SDWA). Examples of eligible projects include:

- Replacement of contaminated sources with new sources;
- Construction of treatment facilities;
- Installation of disinfection facilities;
- Projects required to address compliance or enforcement issues;
- System consolidation or interconnection to address capacity issues;
- Replacement of aging infrastructure, including distribution and transmission lines;
- Upgrade or rehabilitation of existing water facilities; or,
- Installation of meters and back flow prevention devices.

Ineligible projects include, but not limited to:

- Dams or rehabilitation of dams;
- Reservoirs not for finished water or treatment process;
- Laboratory fees for monitoring;
- Operation and maintenance expenses;
- Projects needed mainly for fire protection; and,
- Projects for systems that lack adequate technical, managerial and financial capability, unless assistance will ensure compliance.

Comprehensive Project Priority List: The Water Supply Division maintains a list of known projects eligible for loans. The list is developed and updated annually. Water systems are encouraged to identify projects and submit applications for this list which are due the first week in April of each year. The highest priority projects with a total cost that does not exceed the estimated funds available during the fiscal year, and comply with Federal and State regulatory requirements, are identified as Anticipated Loan Recipients on the list. The Water Supply Division may also add projects to the list without an application from the water system.

Loan Terms and Rates: Interest rates range from 3.00% to -3.00% and loan terms range from 20 to 30 years. Interest rates and administrative fees will be established at the time of loan award. All other determinations are considered preliminary estimates. See the loan rate and term fact sheet for more information on interest rate and administrative fee determinations.

Maximum and Minimum Loan Amounts: While a minimum loan amount has not been established, no more than $2 million of the funds available in any given year can go to a single project, without specific review and approval by the Secretary. Projects with costs exceeding the $2 million cap can be funded over several fiscal years up to a maximum of $6 million for that project. Such projects receive continuing status, which elevates the project's priority list ranking.

Planning Loans

Eligible Organizations:

- Municipal community water systems with a population under 10,000
- Municipal non-transient, non-community, (NTNC) water systems
- Private non-profit community water systems with a population under 10,000

Preliminary engineering planning studies and final engineering plans and specifications for water system improvement projects needed to comply with state and federal standards and protect public health can be covered under a planning loan. Nearly all water system improvement projects are eligible (new construction, renovation or replacement, or consolidation of systems). *Costs incurred prior to a commitment of loan funds by the DEC are not eligible for a loan.*

Project Priority List: The Water Supply Division maintains a project priority list for planning loans only if there is a shortage of funds. Applications are accepted on a continuing basis.

Loan Terms and Rates: Planning loans are 0% for a five-year term but, if applicable, will be rolled into a construction loan at the interest and term identified for the construction loan.

Maximum Loan Amount: The maximum *annual* loan amount is $100,000, except when there is a surplus of funds or when the Secretary of the Agency of Natural Resource specifically approves an exception.

Loan Forgiveness: Under certain circumstances, up to $50,000 of the planning loan balance for a municipal water system may be forgiven by the Secretary of the Agency of Natural Resources following the completion of project construction. Municipal school water systems are eligible for up to $25,000 under a planning loan and an additional $25,000 under a construction loan. Municipal water systems eligible for forgiveness must meet the following general criteria before receiving forgiveness.

- Make all improvements for which the planning and construction loan was provided;
- Meet conditions in the permit to construct;
- Stay current on WSD fees;
- Pass a compliance review; and,
- Pass a capacity review.

Major Planning Loan Steps:

- Send out a Request for Proposal (RFP) for engineering services;
- After an engineer is selected, the engineer provides the water system with a draft engineering services agreement. The water system then applies for a planning loan; be sure to include contracts or invoices for costs and services not covered in the engineering services agreement;

- Complete a Capacity Evaluation/Improvement Plan with WSD's Capacity Development Coordinator;
- After review and approval of the engineering services agreement by the WSD, sign and return the agreement to the DWSRF Project Development Specialist;
- Execute loan documents;
- Submit requisition for reimbursement on a monthly basis. The water system must pay engineering and other services up front and submit invoices and copies of the processed checks to the Facilities Engineering Division; and
- Reimbursement checks for approved services will be sent to the authorized representative within 30 days of the requisition submittal.

Source Protection Loans

Eligible Organizations:

- *Municipal Water Systems*

Water systems may apply for a source protection loan to purchase land or a conservation easements to protect public water sources and ensure compliance with state and federal drinking water standards. The source must have a hydrogeologically delineated source protection area (no default 3000' radius source protection areas) and an approved Source Protection Plan prior to loan award. Water systems must also demonstrate how the project will directly promote public health protection or compliance with national drinking water regulations.

Loan Terms and Rates: 3% interest, 20 year term

Loan Amounts: Maximum loan amount is $200,000. There is no minimum loan amount.

Project Ranking: A project priority list is maintained by the Water Supply Division. A priority score is established for each eligible project by assigning points based on established criteria. The criteria, most of which are the same as construction projects, include the following general categories: (1) Population; (2) Financial need/affordability; (3) Downtown area preference; and, (4) Source protection.

Priority List Applications: Applications accepted on a continuing basis.

Loan Recipients: The highest priority projects on the priority list are funded as funds become available.

Loan Applications: Water systems are required to submit a project schedule for

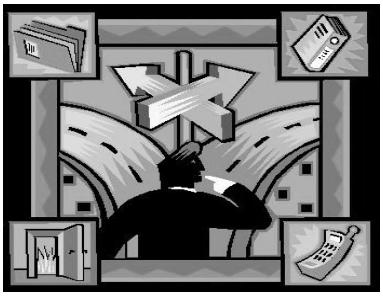
approval by the Water Supply Division within 30 days of notification of available funding.

Loan Conditions:

- Management in accordance with Source Protection Plan;
- Prohibition on sale of land as long as source remains a state-permitted public water source; and,
- Requirement for an annual inspection and report.

Procurement Requirements:

- A minimum of two appraisals required for evaluation purposes;
- Proposed easements and purchase agreements require review and approval by WSD;
- Normal closing requirements, such as title search, apply; and,
- Purchase must be from a willing seller.



CHAPTER 9
CAPACITY DEVELOPMENT

Well-run water systems are considered to have adequate capacity. The terms "capacity development" and "capacity assurance" are unique to the drinking water industry, and are not related to quantity, but rather sustainability.

The Vermont Capacity Development Program

Capacity Development is the process by which water systems acquire, maintain and build upon their technical, managerial and financial capabilities to enable them to consistently provide safe drinking water to their customers in a reliable and cost-effective manner. The capacity development program provides a framework for state agencies, local governments, stakeholder groups or organizations, water systems and the public to ensure that water systems acquire and maintain the ability to achieve compliance with applicable State and Federal drinking water regulations.

Capacity is achieved through proficiency in the following three areas:

- **Technical capacity** refers to the physical infrastructure of the water system, including but not limited to, adequacy of the source water, infrastructure (source, treatment, storage, and distribution), and the ability of system personnel to implement the requisite technical knowledge.
- **Managerial capacity** refers to the management structure of the water system, including but not limited to, ownership accountability, staffing and organization, and effective linkages to customers and regulatory agencies.
- **Financial capacity** refers to the financial resources of the water system, including, but not limited to, revenue sufficiency, credit worthiness, and fiscal controls.

Vermont's Capacity Program was established on October 1, 1999. The 1996 Safe Drinking Water Amendments provided requirements that all *new* community and non-transient non-community water systems demonstrate capacity.

Capacity development assistance through the WSD is available for decision makers at small water systems. Technical assistance is provided by the Water Supply Division or outside contractors in the form of seminars, workshops, on-site visits and trade shows held throughout Vermont each year. While the emphasis has always been on building the technical capacity of water systems, workshops and on-site assistance in the managerial and financial capacity areas are now being offered.

Financial Capacity

There has been an emphasis on communication throughout this handbook relative to financial capacity. A water board should have an ongoing dialogue with the person who is responsible for keeping the books. Monthly meetings should include a review of expenditures and revenues, and how the actual numbers compare to the budgets. This includes monitoring the cash flow and considering adjusting the billing period (more frequent billing smoothes out cash flow*),* if it is a problem. It is a good idea to set up a system of checks and balances, such as requiring internal controls on how money is received and expended. An external audit may also be wise for some larger systems.

Several staff could be involved with internal financial controls:

- **One staff person** *(or board member)* might be charged with receiving and recording payments, and another with verifying that all items received are recorded.
- **A second staff person** could prepare deposit slips.
- **A third staff member** could record the amount in the accounting system, and verify that the deposit was made.
- **A fourth staff member** could be charged with reconciling the bank statement, verifying that the bank statement matches the deposits that were supposed to have been made.

Likewise, expenditures can be handled so that one person writes checks, while another signs them, and yet another does the bank statement reconciliation. This system may sound like over-kill, but with a clerk/secretary, and a well-managed three-member board, it is possible to implement some control.

Longer-term financial security depends on good budgeting, which is the basis of any planning and monitoring process for a system. One of the keys to successful financial planning is to use the results of the annual budget review to either adjust expenditures or revenues. Expenditures are usually mandated by regulations, debt service, utility costs, etc., and are usually scrutinized carefully. Therefore, often the only way to balance the budget is to adjust rates.

An ongoing challenge for small water systems has been to meet the regulatory requirements and find the means to finance needed improvements to remain in long-term compliance. Achieving and maintaining capacity is the ability to commit to the technical, managerial and financial requirements necessary to meet state and federal requirements.

The most important concept is *commitment*. If the board is not committed to its mission, then the system is in for a rocky future. Water systems need attention, which means planning for future regulations, replacement of components, growth, and attention to the customers' needs.

Managerial Capacity

Suggestions for Recruitment

Boards often consist of an average of three citizens usually having some experience in business or some other facet of volunteer civic service (school board, planning board, town council, etc.). More often than not, they are of the same generation. Seniors and those of middle age seem to be the predominant age group serving on boards.

Assess the Makeup of Your Water Board

Taking into consideration that one of a board's primary functions is planning, any board should look at itself from time to time to assess its own makeup, especially in terms of the age of its members, as a measure of how the system will be managed into the future.

What kind of qualities should you look for in recruiting new members? It's tempting to want to bring people on board who look, think and act as you do, but this may not

always be wise. Instead, look for traits such as:

- commitment;
- understanding;
- experience;
- the ability to be available; and,
- tolerance in respecting other points of view.

Skills that are transferable might include experience as a business manager, financial officer or previous experience as a board member. People with technical skills, such as plumbers, fire fighters, or scientists bring a valuable perspective when decisions need to be made concerning water system technical needs. *Keep in mind that the board is a governing, planning, and policy making body where teamwork is key.*

Consider forming sub-committees to explore issues such as project planning. Using constituents in addition to board members on these committees will result in very positive results, especially in terms of gaining public support for infrastructure improvement projects. Sub-committees can serve as training ground for good people who otherwise might view board membership as beyond their abilities and commitment level.

The Bottom Line

In the final analysis, our view of the role of a governing board is that board members are individuals who have come together to work toward a common purpose. In the case of drinking water systems, this is to ensure the public has safe, affordable, and plentiful water. This will consist of making decisions that, in some cases, will involve some technical, managerial and financial information that may not always be within the grasp of all members. Therefore, the members of the board must be open to listening to information and recommendations of experts (including the certified operator), regulators and the public. In order to ensure that decisions are made in the best interest of the public, anyone sitting on a water board must keep in mind that they are keepers of the public's trust. It is up to each governing board to make sure that their successors are persons of integrity, and that they will act in the best interest of the public while serving on the board.

APPENDIX A

Sample By-Law Table of Contents

Sample By-Law (Policy Manual) Table of Contents

Source: The Water Board Bible

Section Topic

Legal Authority, Applicable Statutes

- Governing body legal status
- Authority
- Powers and Duties
- Board/Council members: number, qualifications, terms of Office, selection/ election, resignation, removal from office
- Meetings

Code of ethics

Personnel

- Superintendent/operator/manager legal status
- Hiring
- Promoting
- Evaluating
- Terminating
- Daily operations: work week, tasks assigned, etc.

Customer Relations

- Ongoing Communications
- Reporting and Handling Problems

Finance

- Funds
- Budgets
- Purchasing
- Contracts
- Accounting
- Audits

External Relationships

- Community Relations

- Organizational Memberships

Facilities, Buildings

- Standards: rounds, smoking, etc.
- Accessibility to the disabled

Equipment

- Staff use; vehicles, telephones, etc.

APPENDIX B

Sample Water Ordinance Table of Contents

Sample Water Ordinance (Rules and Regulations) Table of Contents

Source: The Water Board Bible

Section Topic

Purpose

- To set out the manner in which service will be provided to customers

Definitions

- Applicant
- Board
- Consumer
- Point of Service

Operations (the "how to's")

- Applications for service
- Right of access by the utility
- Continuity of service
- Control equipment and location
- Notices prior to disconnection
- Meter tests
- Changes in occupancy
- Extensions to the system
- Costs for service

Customer relations

- Paying bills: where, when
- Initiating service
- Disconnecting service
- Restoration charge
- Reading meters
- Security deposits
- Delinquent accounts
- Adjustments
- Reporting problems and emergencies

APPENDIX C

Sample Operator Job Description

Sample Operator Job Description

Operational duties of a primary water system operator are WSR 21-12.2.2

1. Conduct routine visual inspections of the system's source, source water protection area, storage facilities, and chemical addition systems.
2. Be familiar with all aspects of the treatment and distribution system operation of the water system.
3. Oversee all bacterial monitoring, chemical monitoring, and other monitoring required under this Rule.
4. Review the sample monitoring schedule and locations quarterly.
5. Ensure that all samples are delivered to a certified laboratory in a timely manner.
6. Inspect system within 24 hours of any positive fecal coliform result, positive Total Coliform repeat sample result, or other water system failures.
7. Notify owner of any violation(s) of this Rule.
8. Ensure the accuracy of water meters and other flow measuring devices.
9. Be responsible for testing, measuring, and recording chemical additions.
10. Operate and maintain chemical feed and all treatment systems.
11. Keep abreast of changes in the drinking water regulations and safety regulations.
12. Fulfill certification and certification renewal requirements.
13. Operate and maintain system in accord with the Operation & Maintenance manual.
14. Attend all inspections as requested by state personnel.
15. Oversee source water protection, watershed protection, and other activities associated with chemical waivers or otherwise required by this Rule.
16. Keep complete and accurate water system records.
17. Carry out all required reporting requirements including submitting a complete monthly report to the Secretary by the 10th day of the following month.
18. Develop and maintain an accurate site plan showing the water source and distribution system.
19. Respond to consumer complaints promptly.
20. Comply with all applicable State and Federal statutes, rules and orders govern-

ing water system regulations

21. Conduct all duties with reasonable care and judgment for the protection of public health, public safety, and the environment.

APPENDIX D

Employee Performance Evaluation

Employee Performance Evaluation

The following points, developed by the League of Kansas Municipalities, can be used as a guide as you prepare an employee evaluation (as included in the *Water Board Bible*). Source: *The Water Board Bible*

The goals of an employee performance evaluation should be to:

- Continuously improve the effectiveness and efficiency of the position;
- Provide an opportunity for communication and planning;
- Assist employees in increasing the effectiveness of their job performance;
- Provide a mechanism for the establishment of individual and Board goals;
- Serve as the basis of acknowledging employee accomplishments and recognizing employee potential need for support and/or training; and,
- Provide documentation of employee performance to serve as the basis for salary adjustments and personnel actions.

Definitions

A *goal or objective* is a predetermined level of production on the job. A goal should be expected to be accomplished within some identifiable time frame.

An *essential function* is what the employee is expected to do. It is non-negotiable between the supervisor and the employee.

Job tasks refer to the mechanics of doing an essential function.

A *performance standard* is a measurable basis for determining or judging what an employee actually accomplishes by doing an essential function.

Supervisor concerns

Often supervisors are uncomfortable evaluators because they:

- dislike criticizing an employee and then perhaps being placed in a debate about his/her evaluative comments;
- feel they lack the skills needed to handle the evaluation process;
- dislike new procedures and forced changes in the way they operate; and,
- Question the measures and validity of the revaluation tool.

Successful performance appraisals

Take these steps so your performance evaluations help all participants:

1. Regularly inform employees about their performance, not just at an annual performance appraisal. Try a biweekly or monthly private meeting.
2. Make sure you have clear, specific performance standards.
3. Train supervisors so they can be objective and fair. Show them how to keep notes throughout the appraisal period, not just remembering what happened during the past few days.
4. Create and/or update your evaluation system with input from employees;
5. Make sure the goals and objectives are consistent with those for other departments or nearby water utilities.
6. Keep the performance evaluation system flexible.
7. Schedule the performance review meeting with the employee several days in advance.
8. Reserve a private room for the meeting where you will be undisturbed.
9. Review the employee's job description and note any changes which need to be discussed.
10. Provide the employee with a copy of the performance review form prior to the meeting.
11. Review any notes from regular supervisory sessions with the employee, any incident file, any special achievements or problems areas, and obtain input from other departments if needed.
12. Honestly critique your own performance as a supervisor during the review period.
13. Specifically define any problem areas and possible solutions prior to presenting them to the employee.
14. Outline the meeting format before the beginning with positive recognition for ar-

eas of strength.

15. Focus on job performance, not personality. It is your job to be fair and equitable, and to listen to the employee's point of view.

Source: *Town of Needham, Massachusetts, Personnel Policies, Publication #419, www.town.needham.ma.us/*

The Performance Review Meeting

1. Be on time and devote your complete attention to this meeting.
2. Share with the employee the outline of the meeting, noting areas for discussion.
3. Ask the employee if there are any specific questions/problems that he/she would like to discuss and set these items into the agenda.
4. Review the previous year's Performance Evaluation Form, any mid-year discussions or special achievements, or other unique circumstances with the employee.
5. Compliment the employee on specific job accomplishments and strengths.
6. Review the completed Evaluation Form with the employee. If you provide the form after the meeting, you should allow the employee an opportunity to respond in writing to the comments on the form.
7. Present specific areas for improvement and discuss them with the employee. Listen carefully to the employee's point of view and his/her suggestions for how the problem could be resolved. Also ask how you may assist him/her in this process.
8. Mutually agree on goals for improving problem areas and schedule a follow-up meeting to discuss progress within one month (if applicable).
9. Discuss any changes in job responsibility/career plans with the employee and consider advancement opportunities and training needs of the employee.
10. Have the employee sign the Performance Evaluation Form and comment as needed.

Thoughts On Performance Evaluation Forms

Performance Evaluation Forms might include 2 to 4 criteria for each job duty. The criteria should be observable, clear, specific, realistic, and easy to follow. Be careful of

identifying performance criteria which are absolute and therefore unachievable.

Example job duty using performance criteria

Conduct water quality tests and adjust chemical dosages following Vermont WSR guidelines to maintain appropriate level of water quality.

Performance Criteria (Performance is successful if…):

- Water treatment plant is tested once per day between 7:00AM and 9:00AM.
- Water quality is maintained within prescribed standards.

Sample Employee Evaluation Formats
(*Source: The Water Board Bible)*

Example 1. General
Employee Name:_____ Position:_____
Frequency of Evaluation (circle one)
Annual Twice yearly Other_____
Date: _____

Strengths
1.
2.
3.
4.

Needs Improvement
Areas needing improvement, and how the board will support that effort:
1.
2.
3.

Overall potential assuming continued satisfactory performance.
_____
_____
_____

Signatures
Supervisor _____
Employee _____
Date _____

Example 2. Specific areas
Employee Name:_____ Position:_____
Frequency of Evaluation (circle one)
Annual Twice yearly Other_____
Date: _____

Strengths
Water/wastewater quality _____
Protection of assets _____
Financial condition _____
Employee relations _____
Customer relations _____
Cost-effective _____
Operations _____

Needs Improvement
Water/wastewater quality _____
Protection of assets _____
Financial condition _____
Employee relations _____
Customer relations _____
Cost-effective _____
Operations _____

Signatures
Supervisor _____
Employee _____
Date _____

APPENDIX E

Vermont's Open Meeting Law

Title 1: General Provisions

Chapter 5: Common Law; General Rights

Sections 312-314

§ 312. Right to attend meetings of public agencies

(a) All meetings of a public body are declared to be open to the public at all times, except as provided in section 313 of this title. No resolution, rule, regulation, appointment, or formal action shall be considered binding except as taken or made at such open meeting, except as provided under section 313(a)(2) of this title. A meeting may be conducted by audio conference or other electronic means, as long as the provisions of this subchapter are met. A public body shall record by audio tape, all hearings held to provide a forum for public comment on a proposed rule, pursuant to section 840 of Title 3. The public shall have access to copies of such tapes as described in section 316 of this title.

(b)(1) Minutes shall be taken of all meetings of public bodies. The minutes shall cover all topics and motions that arise at the meeting and give a true indication of the business of the meeting. Minutes shall include at least the following minimal information:

(A) All members of the public body present;

(B) All other active participants in the meeting;

(C) All motions, proposals and resolutions made, offered and considered, and what disposition is made of same; and,

(D) The results of any votes, with a record of the individual vote of each member if a roll call is taken.

(2) Minutes of all public meetings shall be matters of public record, shall be kept by the clerk or secretary of the public body, and shall be available for inspection by any person and for purchase of copies at cost upon request after five days from the date of any meeting.

(c)(1) The time and place of all regular meetings subject to this section shall be clearly designated by statute, charter, regulation, ordinance, bylaw, resolution or other determining authority of the public body and this information shall be available to any person upon request.

(2) The time, place and purpose of a special meeting subject to this section shall be publicly announced at least 24 hours before the meeting. Municipal public bodies shall post notices of special meetings in or near the municipal clerk's office and in at least two other public places in the municipality, at least 24 hours before the meeting. In addition, notice shall be given, either orally or in writing, to each member of the public body at least 24 hours before the meeting, except that a member may waive notice of a special meeting.

(3) Emergency meetings may be held without public announcement, without posting of notices and without 24-hour notice to members, provided some public notice thereof is given as soon as possible before any such meeting. Emergency meetings may be held only when necessary to respond to an unforeseen occurrence or condition requiring immediate attention by the public body.

(4) Any adjourned meeting shall be considered a new meeting, unless the time and place for the adjourned meeting is announced before the meeting adjourns.

(5) An editor, publisher or news director of any newspaper, radio station or television station serving the area of the state in which the public body has jurisdiction may request in writing that a public body notify the editor, publisher or news director of special meetings of the public body. The request shall apply only to the calendar year in which it is made, unless made in December, in which case it shall apply also to the following year.

to the judicial branch of the government of Vermont or of any part of the same or to the public service board; nor shall it extend to the deliberations of any public body in connection with a quasi-judicial proceeding; nor shall anything in this section be construed to require the making public of any proceedings, records, or acts which are specifically made confidential by the laws of the United States of America or of this state.

(f) A written decision issued by a public body in connection with a quasi-judicial proceeding need not be adopted at an open meeting if the decision will be a public record.

(g) The provisions of this subchapter shall not apply to site inspections for the purpose of assessing damage or making tax assessments or abatements, clerical work, or work assignments of staff or other personnel. Routine day-to-day administrative matters that do not require action by the public body, may be conducted outside a duly warned meeting, provided that no money is appropriated, expended, or encumbered.

(h) At an open meeting the public shall be given a reasonable opportunity to express its opinion on matters considered by the public body during the meeting as long as order is maintained. Public comment shall be subject to reasonable rules established by the chairperson. This subsection shall not apply to quasi-judicial proceedings.

(i) Nothing in this section shall be construed to prohibit the parole board from meeting at correctional facilities with attendance at the meeting subject to rules regarding access and security established by the superintendent of the facility. (Amended 1973, No. 78, § 1, eff. April 23, 1973; 1979, No. 151 (Adj. Sess.), § 2; 1987, No. 281 (Adj. Sess.), § 2; 1997, No. 148 (Adj. Sess.), § 64, eff. April 29, 1998; 1999, No. 146 (Adj. Sess.), § 7.)

§ 313. Executive sessions

(a) No public body described in section 312 of this title may hold an executive session from which the public is excluded, except by the affirmative vote of two-thirds of its members present in the case of any public body of state government or of a majority of its members present in the case of any public body of a municipality or other political subdivision. A motion to go into executive session shall indicate the nature of the busi-

ness of the executive session, and no other matter may be considered in the executive session. Such vote shall be taken in the course of an open meeting and the result of the vote recorded in the minutes. No formal or binding action shall be taken in executive session except actions relating to the securing of real estate options under subdivision (2) of this subsection. Minutes of an executive session need not be taken, but if they are, shall not be made public subject to subsection 312(b) of this title. A public body may not hold an executive session except to consider one or more of the following:

(1) Contracts, labor relations agreements with employees, arbitration, mediation, grievances, civil actions, or prosecutions by the state, where premature general public knowledge would clearly place the state, municipality, other public body, or person involved at a substantial disadvantage;

(2) The negotiating or securing of real estate purchase options;

(3) The appointment or employment or evaluation of a public officer or employee;

(4) A disciplinary or dismissal action against a public officer or employee; but nothing in this subsection shall be construed to impair the right of such officer or employee to a public hearing if formal charges are brought;

(5) A clear and imminent peril to the public safety;

(6) Discussion or consideration of records or documents excepted from the access to public records provisions of section 317(b) of this title. Discussion or consideration of the excepted record or document shall not itself permit an extension of the executive session to the general subject to which the record or document pertains;

(7) The academic records or suspension or discipline of students;

(8) Testimony from a person in a parole proceeding conducted by the parole board if public disclosure of the identity of the person could result in physical or other harm to the person;

(9)Information relating to a pharmaceutical rebate or to supplemental rebate agreements, which is protected from disclosure by federal law or the terms and conditions required by the Centers for Medicare and Medicaid Services as a condition of rebate authorization under the Medicaid program, considered pursuant to 33 V.S.A. §§

1998(f)(2) and 2002(c).

(b) Attendance in executive session shall be limited to members of the public body, and, in the discretion of the public body, its staff, clerical assistants and legal counsel, and persons who are subjects of the discussion or whose information is needed.

(c) The senate and house of representatives, in exercising the power to make their own rules conferred by Chapter II of the Vermont Constitution, shall be governed by the provisions of this section in regulating the admission of the public as provided in Chapter II, section 8 of the Constitution. (Amended 1973, No. 78, § 2, eff. April 23, 1973; 1979, No. 151 (Adj. Sess.), § 3, eff. April 24, 1980; 1987, No. 256 (Adj. Sess.), §§ 3, 4; 1997, No. 148 (Adj. Sess.), § 65, eff. April 29, 1998; 2005, No. 71, § 308a, eff. June 21, 2005.)

§ 314. Penalty and enforcement

(a) A person who is a member of a public body and who knowingly and intentionally violates the provisions of this subchapter or who knowingly and intentionally participates in the wrongful exclusion of any person or persons from any meeting for which provision is herein made, shall be guilty of a misdemeanor and shall be fined not more than $500.00.

(b) The attorney general or any person aggrieved by a violation of the provisions of this subchapter may apply to the superior court in the county in which the violation has taken place for appropriate injunctive relief or for a declaratory judgment. Except as to cases the court considers of greater importance, proceedings before the superior court, as authorized by this section and appeals there from, take precedence on the docket over all cases and shall be assigned for hearing and trial or for argument at the earliest practicable date and expedited in every way. (Amended 1979, No. 151 (Adj. Sess.), § 4, eff. April 24, 1980; 1987, No. 256 (Adj. Sess.), §5.)

APPENDIX F

Additional Resources

Chapter 1- Introduction

EPA's Safe Drinking Water Act
http://www.epa.gov/safewater/sdwa/index.html

Vermont Environmental Protection Rules
http://www.anr.state.vt.us/dec/rulessum.htm

Vermont Water Supply Rule
http://www.vermontdrinkingwater.org/wsrule/Vermont%20WSR%20April%202005.pdf

The Water Board Bible can be purchased from the Kansas Rural Water Association
www.krwa.net/estore/proddetail.asp?prod=WBB

Chapter 2– Government Oversight and Assistance

Vermont Statutes
http://www.leg.state.vt.us/statutes/statutes2.htm

ANR GIS Well Locator & Environmental Interest Locator
http://www.anr.state.vt.us/site/html/maps.htm

Department of Public Service– Water Division
http://publicservice.vermont.gov/water/water.html

Public Service Board
http://www.state.vt.us/psb/

Chapter 3– Board Meetings

Open Meeting Law

http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=01&Chapter=005&Section=00312

Chapter4– Operations

WSD's Operator Page

http://www.vermontdrinkingwater.org/wsysops.htm

EPA's Operator Page

http://www.epa.gov/safewater/operatorcertification/index.html

List of Vermont's Certified Labs

http://healthvermont.gov/enviro/ph_lab/documents/certified_labs.pdf

How to Hire an Operator

http://www.vermontdrinkingwater.org/forms/HiringAnOperator.pdf

Chapter 5– Budgets and Setting User Rates

Check Up Program for Small Systems (CUPSS)

http://www.epa.gov/cupss/

Environmental Finance Center– Boise State University

http://efc.boisestate.edu/efc/

EPA's *Setting Small Drinking Water System Rates for a Sustainable Future*

http://www.epa.gov/waterinfrastructure/pdfs/final_ratesetting_guide.pdf

Full Cost Pricing Report

http://www.epa.gov/waterinfrastructure/pdfs/workshop_si_fullcostpricing.pdf

Vermont Municipal Water and Sewer Rate Information

http://resources.vlct.org/u/ResourceLibrary_2006%20Vermont%20Municipal%20Water%20and%20Sewer%20Rate%20Information%20Final_Update2008.pdf

General Information Regarding Water Pricing
http://www.epa.gov/waterinfrastructure/pricing/index.htm

Chapter 6– Communication

EPA's Consumer Confidence Report Page
http://www.epa.gov/safewater/ccr/index.html

Preparing Your Drinking Water Consumer Confidence Report- An EPA publication
http://www.epa.gov/safewater/ccr/pdfs/guide_ccr_forwatersuppliers.pdf

WSD's Public Notification information
http://www.vermontdrinkingwater.org/forms/PublicNoticeCertification.pdf

Revised Public Notification Guide- An EPA publication
http://www.epa.gov/safewater/publicnotification/pdfs/guide_publicnotification_pnhandbook.pdf

Chapter 7– Planning

Asset Management: A Best Practices Guide– An EPA publication
http://www.epa.gov/safewater/smallsystems/pdfs/guide_smallsystems_assetmanagement_bestpractices.pdf

Asset Management for Local Officials– An EPA publication
http://www.epa.gov/safewater/smallsystems/pdfs/guide_smallsystems_assetmanagement_localofficials.pdf

Check-up Program for Small Systems (CUPSS)
http://www.epa.gov/cupss/

WSD's Emergency Response Planning and Vulnerability Assessment page
http://www.vermontdrinkingwater.org/counter-terrorism-info.htm

EPA's Water Security page
http://cfpub.epa.gov/safewater/watersecurity/index.cfm

WSD's Source Water Protection page
http://www.vermontdrinkingwater.org/swapp.htm

EPA's Source Water Protection page
http://cfpub.epa.gov/safewater/sourcewater/

Chapter 8– Drinking Water State Revolving Loan Fund
WSD's DWSRF page
http://www.vermontdrinkingwater.org/grants.htm

DWSRF Guidance Documents
http://www.vermontdrinkingwater.org/DWSRFguidance.htm

Vermont Municipal Bond Bank
http://vtbondagency.org/

USDA– Rural Development Funding page
http://www.usda.gov/rus/water/index.htm

Asset Management: A Handbook for Small Water Systems- Published by the US EPA
http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_asset_mgmnt.pdf

FUNDING
Vermont Water Supply Division
Old Pantry Building
103 South Main St.
Waterbury, VT 05671-0403
Phone: (800) 823-6500 toll-free in VT
(802) 241-3400
Fax: (802) 241-3284
www.vermontdrinkingwater.org

Vermont Drinking Water State Revolving Loan Fund
For more information on drinking water SRF
contact Bryan Redmond at (802) 241-3408
or e-mail bryan.redmond@state.vt.us

Vermont Municipal Bond
56 East State Street
P.O. Box 564
Montpelier, VT 05602
(800) 894-2717 Fax: (802) 229-4709
Email: bond_bank@vtbondagency.org

USDA – Rural Utilities Service Vermont/New Hampshire Rural Development
Water and Environmental Programs Staff
89 Main Street, City Center, Third Floor
Montpelier, VT 05602
VT Office: (802) 828-6080
Rhonda Shippee, Director
Rhonda.shippee@vt.usda.gov

Chapter 9– Capacity Development
WSD's Capacity Development Program page
http://www.vermontdrinkingwater.org/capacity.htm

EPA's Capacity Development Program Page
http://www.epa.gov/safewater/smallsystems/

RELATED AND HELPFUL WEBSITES
USEPA Office of Groundwater and Drinking Water
http://www.epa.gov/safewater/

Effective Utility Management
http://www.watereum.org/index.php

Vermont Rural Water Association
http://www.vtruralwater.org/

Vermont League of Cities and Towns
http://www.vlct.org/

Green Mountain Water Environment Association
http://www.gmwea.org/

Resources for Communities and People– RCAP Solutions
http://www.rcapsolutions.org/

National Environmental Services Center
http://www.nesc.wvu.edu/index.cfm

Vermont Community Development Block Grant Program
http://www.dhca.state.vt.us/VCDP/index.htm

American Water Works Association
http://www.awwa.org/index.cfm

New England Water Works Association
http://www.newwa.org/

The Groundwater Foundation
http://www.groundwater.org/

Strategic Planning: A Handbook for Small Water Systems
http://www.epa.gov/OGWDW/smallsystems/pdfs/guide_smallsystems_stratplan.pdf

WaterSense– Water Efficiency
http://www.epa.gov/WaterSense/

Liquid Assets– The Story of Our Water Infrastructure
http://www.liquidassets.psu.edu/

The Safe Drinking Water Trust
http://www.watertrust.org/

Running Your System Like a (Good) Business
On Tap: Summer, 2004, Volume 4, Issue 2
http://www.nesc.wvu.edu/ndwc/articles/OT/SU04/GoodBusiness.pdf